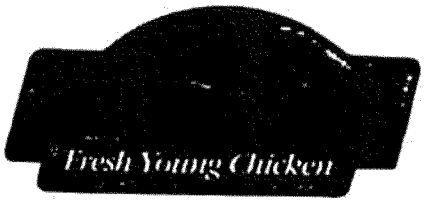

Dear Homeowner:

This letter is to let you know that recently Mountaire Farms of Delaware Inc. (Mountaire) has been notified that certain water supply sources in the vicinity of Mountaire's Millsboro plant have historically contained levels of nitrate that are somewhat higher than the standards established by the U.S. Environmental Protection Agency (EPA) and the Delaware Department of Public Health (DPH). As a result, Mountaire, EPA and DPH are reviewing the situation to determine what should be done to address the matter. In the meantime, Mountaire, on a voluntary basis is by this letter offering to supply you, free of charge, bottled water in sufficient quantities to meet all potable (drinking) water needs until this matter is resolved. If you want Mountaire to supply such water, please contact me at (302) 934-3094 to make appropriate arrangements. Also, enclosed is some information regarding nitrates and drinking water which you may find useful.

Thank you for your attention.

Yours Truly,

Jeffrey Smith, REM
Environmental Manager
Mountaire Farms Inc.

Mountaire Farms of Delaware, Inc.
P.O. Box 1320, Millsboro, Delaware 19966
(302) 934-1100 Toll Free (877) 887-1490

"We measure quality by how well we service our internal and external customers"

PHOTO: Jesse Cooper Building

Jesse Cooper Building

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NITRITES & NITRATES

What are they? Nitrates and Nitrites are naturally occurring inorganic ions and are part of the nitrogen cycle. Substances containing organic nitrogen such as fertilizers, animal waste, and plant materials, enter the soil and decompose to ammonia which is oxidized to nitrites and nitrates.

What happens to them? Both ions are very mobile in soil and readily move in groundwater. Potential sources of contamination of groundwater by nitrates include inorganic fertilizers, animal wastes (runoff from agricultural sources), human wastes (failing septic systems), and natural occurrence at low levels. Other potential human exposures to nitrates include: natural occurrence in vegetables and vegetable juices and cured meats (bacon, hot dogs). Drinking water (groundwater and surface water) are a concern with regard to nitrates because nitrates readily dissolve and move freely to the water table with rainwater, or irrigation water that is applied to the land. Nitrates are readily absorbed following ingestion.

What are the public health concerns associated with nitrates in drinking water? Eighty percent of Delaware residents have community water systems as a primary source of drinking water. During routine daily activities nearly all Delawareans consume water from a public water system. Twenty percent of Delaware residents use a private well as their primary source of drinking water.

The primary population sensitive to nitrates in drinking water are infants weighing less than 4 Kg (8.8 lbs.). Only those infants on formula (or other liquids) reconstituted using a source of water containing nitrates at greater than 10 ppm are at risk. This standard of 10 ppm continues to be routinely reviewed by US EPA. Other potentially affected populations include pregnant women, unborn children and nursing infants. Nitrates harm infants more so than adults because naturally occurring bacteria in the digestive system result in a higher pH (less acid). In these conditions nitrates are changed to the more toxic nitrites. Nitrites react with hemoglobin in the red blood cells. This markedly decreases the ability of the blood to carry oxygen resulting in a condition called methemoglobinemia which manifests itself as cyanosis, or "blue baby syndrome". In severe cases, this condition could lead to coma or death.

Does DHSS/DPH have data on current levels of nitrates in drinking water supplies? Of 571 public water systems in Delaware, six are currently on notice for exceeding the nitrate standard (10 ppm). These six water systems in violation serve 1,283 people or 0.2% of Delaware's population on public water systems. The customers of all six systems have been notified that the water exceeds State and U.S. EPA limits. The DPH is working with these systems to return them to compliance by installing appropriate treatment or finding an alternate source of water. For private wells, recent studies by the U.S. Geological Survey show that 85% of shallow wells (uppermost water aquifer) on the Delmarva Peninsula are below 10 ppm nitrates. Although Delaware does not regulate water quality in private wells, the DPH offers inexpensive nitrate test kits available at local county health units.

Precautions to be taken to avoid adverse health effects from nitrates. Have your

water tested by an approved laboratory. If there are high levels use bottled water for infants, nursing mothers and expecting women. Do not boil water to remove nitrates. Boiling could make the concentration even higher.

References. Brooks, S. M., M. Gochfeld, J. Herzstein, R. J. Jackson and M. B. Schenker. Environmental Medicine, Mosby, St. Louis, MO, 1995.---Talbott, E. O. and G. F. Craun. Environmental Epidemiology. Lewis Pub., Boca Raton, 1995.---Montgomery, J. H. Groundwater Chemicals Field Guide, Lewis Publishers, Chelsea, MI, 1991.---U.S. EPA, Office of Drinking Water, Health Advisory, Washington, DC, 1987.

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